

P/518/62/011/001/004/008

D207/D308

Magnetic birefringence of liquid ...

measured by the standard Chauvin method (using a monochromatic light beam passing in turn through a polarizer, a sample between the poles of an electromagnetic producing a constant magnetic field a quarter-wave plate, and an analyzer with half-shade plates). The light beam was normal to the magnetic field lines. The Cotton-Mouton constant of pure solvent (CCl_4) was zero. The absolute value of C increased with the solute concentration reaching $C = 2.66 \times 10^{-12}$ for pure nitrobenzene, 2.30×10^{-12} for pure m-nitrotoluene 1.64×10^{-12} for pure o-nitrotoluene, 1.36×10^{-12} for pure o-nitroanisol and -2×10^{-13} for pure 1,2-dibromoethane (all these constants are in units of $\text{Oe}^{-2} \cdot \text{cm}^{-1}$). Acknowledgement is made to Professor Doctor A. Pickara for his advice and discussions. There are 3 figures and 5 tables.

ASSOCIATION: Katedra Fizyki Doświadczalnej Uniwersytetu im. A. Mickiewicza w Poznaniu (Department of Experimental Physics, A. Mickiewicz University, Poznań)

Card 2/2

P/518/62/011/001/005/008
D207/D308

AUTHOR: Surma, Marian

TITLE: Magnetic birefringence of liquid solutions. II. Investigation of magnetic birefringence of polar liquids and their solutions in benzene using strong pulsed magnetic fields

SOURCE: Poznańskie Towarzystwo Przyjaciół Nauk. Komisja Matematyczno-Przyrodnicza. Prace. v. 11, no. 1, 1962. Fizyka dielektryków. no. 1, 131 - 150

TEXT: This paper was presented on October 19, 1961, at a meeting of the Komisja Matematyczno-Przyrodnicza PTPN (Mathematical and Scientific Committee, PTPN). The Cotton-Mouton magnetic birefringence constants, C, of nitrobenzene, m-nitrotoluene, o-nitrotoluene, o-nitroanisol and their solutions in benzene were measured in the same way as in Part I (see preceding paper) except that pulsed magnetic fields were used. These fields were produced by discharging a battery of $14 \times 1 \mu\text{F}$ capacitors charged to 50 KV through an air-cored coil. The apparatus was the same as in the work of Piekara et al.

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Magnetic birefringence of ...

al. (Acta Phys. Polon., v. 15, 381, 1956; Proc. Phys. Soc. B, v. 70, 432, 1957), except that the latter workers used $14 \times 2 \mu\text{F}$ capacitors. The coil consisted of 23 turns of copper strip and the useful volume was 25 cm^3 in which 126 μsec 150 kOe pulses were obtained. Measurements of C were carried out in the same way as in Part I. The Cotton-Mouton constant of pure solvent (benzene) was $C = 0.71 \times 10^{-12} \text{ Oe}^{-2} \cdot \text{cm}^{-1}$. The absolute value of C increased with the concentration of (1) nitrobenzene, (2) m-nitrotoluene and (3) o-nitrotoluene in benzene reaching 2.66×10^{-12} , 2.25×10^{-12} and 1.58×10^{-12} for the pure liquids (1), (2) and (3) respectively. In the case of o-nitroanisole in benzene increase of the solute concentration first reduced C to a minimum at about 5 % of the solute and then raised C again so that it reached 1.34×10^{-12} (all these constants are in units of $\text{Oe}^{-2} \cdot \text{cm}^{-1}$). The author also investigated magnetic birefringence of 1,2-dibromoethane solutions in benzene in constant magnetic fields. The Cotton-Mouton constant of pure 1,2-dibromoethane was $-2 \times 10^{-13} \text{ Oe}^{-2} \cdot \text{cm}^{-1}$, while the C values of its solutions in benzene increased with decreasing solute concentration.

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passing through zero at about 81 % of the solute and thereafter becoming positive. The Cotton-Mouton constants obtained in this work were used to calculate the molar Cotton-Mouton constants; the latter are used in Part III to compare the experimental results with the theory of magnetic birefringence of liquids. Acknowledgement is made to Professor Doctor A. Piekara for his advice. There are 10 figures and 5 tables.

ASSOCIATION: Katedra Fizyki Doświadczalnej Uniwersytetu im. A. Mickiewicza w Poznaniu (Department of Experimental Physics, A. Mickiewicz University, Poznań)

Card 3/3

p/518/62/011/001/006/008
D207/D308

AUTHORS: Kielich, Stanisław, and Surma, Marian

TITLE: Magnetic birefringence of liquid solutions. III. Theory and comparison with experiment

SOURCE: Poznańskie Towarzystwo Przyjaciół Nauk. Komisja Matematyczno-Przyrodnicza. Prace. v. 11, no. 1, 1962. Fizyka dielektryków. no. 1, 153 - 172

TEXT: This paper was presented on October 19, 1961, at a meeting of the Komisja Matematyczno-Przyrodnicza PTPN (Mathematical and Scientific Committee, PTPN). A general formula is obtained for the molar Cotton-Mouton constant, C_M , of multicomponent systems and it is applied to liquid solutions of polar liquids in nonpolar solvents. It is found that for condensed multi-component systems C_M is not an additive quantity. This nonadditivity is due to interactions between like molecules as well as between unlike molecules. If these interactions can be neglected, as in the case of rarified gases, then C_M is an additive quantity. The constant C_M of a binary solution can be represented formally as a sum of the molar con-

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stants C_1^M and C_2^M of the two components. These constants include, however, angular correlation factors $R_{CM}^{(1)}$ and $R_{CM}^{(2)}$ which depend linearly on the molar fractions of the two components in the solution and on parameters J_{ij} ($i, j = 1, 2$) which are determined by

the molecular symmetry and intermolecular interactions. The theory predicts different values of the correlation factors for different molecular symmetries. For polar molecules of a given symmetry the correlation factors depend on the symmetry of nonpolar solvent molecules. Assumption of spherical symmetry for solvent molecules gives a linear dependence of R_{CM} on the concentration of the solution.

Measurements of magnetic birefringence reported in Parts I and II, and by E.J. Burge and O. Snellman, for solutions of polar liquids in carbon tetrachloride (spherical molecules) show that within the experimental error the angular correlation factors of the polar components, in agreement with the theory depend linearly on the concentration of the solution. Comparing the experimental values of the correlation factors for pure liquids with the theoretical expressions, parameters J_{ii} are calculated and the numerical values ob-

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tained are used to determine the molar constants C^M for solutions of polar liquids in benzene. The values of C^M calculated in this way agree satisfactorily with the experimental values, especially for concentrated solutions, with the exception of m-nitrotoluene in benzene. The deviations of the theoretical values of C^M from the experimental constants at low concentrations are the consequence of the assumption that $J_{12} = J_{21} = 0$, i.e. they are due to neglecting the interactions between solvent and solute molecules. If non-zero values of J_{12} and J_{21} are used, the agreement between the theory and experiment is improved. The assumption $J_{12} = J_{21} = 0$ is justified only for solutions of nitrobenzene because the molar constant C^M of nitrobenzene in solution is independent of the nature of the solvent (cf. Parts I and II). Acknowledgement is made to Professor Doctor Piekara for discussions and advice. There are 6 figures and 1 table.

ASSOCIATION: Instytut Fizyki Polskiej Akademii Nauk, Poznań (Institute of Physics, Polish Academy of Sciences, Poznań)

Card 3/4

Magnetic birefringence of ...

P/518/62/011/001/006/008
D207/D308

(S. Kielich); Katedra Fizyki Doświadczalnej Uniwersytetu im. A. Mickiewicza w Poznaniu (Department of Experimental Physics, A. Mickiewicz University, Poznań)
(M. Surma)

Card 4/4

ACCESSION NR: AP4040366

P/0045/64/025/003/0485/0501

AUTHOR: Surma, M.

TITLE: Magnetic birefringence of solutions of dipolar liquids
in non-dipolar solvents

SOURCE: Acta physica polonica, v. 25, no. 3, 1964, 485-501

TOPIC TAGS: magnetic birefringence, dipolar liquid, nitrobenzene,
magneto optics

ABSTRACT: The magnetic birefringence of two-component solutions of liquids was measured, the dipolar component being nitrobenzene, m-nitrotoluene, o-nitrotoluene, o-nitronisol, 1,2-dibromoethane, and the other, non-dipolar component of the solution being carbon tetrachloride or benzene. The density and refractive index of the solutions were measured. The data obtained were used in computing the molar Cotton-Mouton constant of the solution. The magnetic birefringence of the dipolar liquid solutions in benzene was measured in strong pulsed magnetic fields up to 100kOe. and that of the same

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ACCESSION NR: AP4040366

liquids in carbon tetrachloride was measured in constant fields. An electronic method was devised for measuring the magnetic birefringence of liquids in pulsed fields. The author thanked Prof. A. Pickara for valuable advice. Orig. art. has: 14 figures and 1 table.

ASSOCIATION: Katedra Fizyki Doswiadczałnej, Uniwersytetu A. Mickiewicza, Poznań
(Institute of Experimental Physics, A. Mickiewicz University)

SUBMITTED: 28Oct63

DATE ACQ: 15May64

ENCL: 01

SUB CODE: GP

NO REF Sov: 001

OTHER: 046

Card 2/3

COUNTRY : USSR
CATEGORY : Farm Animals.
 : The Swine.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12044 Q
AUTHOR : Akulinin, A. A.; Kovalev, N. A.; Surma, V. V.
INST. : Vitebsk Institute of Veterinary Science.
TITLE : The Blood Supply of Cranial Cervical
 : Sympathetic Ganglia in the Pig.
ORIG. PUB. : Uch. zap. Vitebskogo vet. in-ta, 1957, 15,
 : 266-272
ABSTRACT : It was shown on 7 carcasses of piglets 2-4
 : months old by using methods of infusing the
 : vessels, as well as preparations and
 : roentgenography that the cranial cervical
 : sympathetic ganglia (CCSG) blood supply
 : divides into branches which form anasto-
 : moses between themselves. The blood supply of
 : the right CCSG proceeds from the external and
 : internal carotid, the occipital-carotid and
 : the superficial temporal arteries. The left
 : CCSG is supplied by the branches of the ox-

Card:

1/2

SURMAGELTOS, M.

Control and Accounting during the course of production in the furniture industry.

P. 214, (Przemysl Drzewny. Vol. 7, no. 7, July 1956, Warszawa, Poland)

Monthly Index of East European Accessions (EAI) IS. Vol. 7, no. 2,
February 1958

SURMACH, G. P.

"Processes of Drainage and Washout on the Rubble Soils of Steep Slopes
in the Southeastern Part of the RSFSR and Connection of These Processes
With the Problems of Forest Improvement." Sub 31 Jan 51, Soil Inst imani V.
V. Dokuchayev, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow
during 1951.

SO: Sun. No. 480, 9 May 55

SARATOV, U.S.S.R.

Forest Ministry

oldest experiment station in steppic forestry. Loc. i step' b, no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, D.L. 1952 ~~1955~~, Uncl.

1. SURMACH, G. P.
2. USSR (600)
4. Soil Percolation
7. Investigation of water permeability and runoff on stony chestnut soils by means of artificial rain. Pochvovedenie. No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

14-57-7-14406
Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,
p 21 (USSR)

AUTHOR: Surmach, G. P.

TITLE: A Reclamational Study of Permeability, Runoff, and
Erosion in Rocky Chestnut Soils on the Right Side of
the Lower Volga (Izuchenije vodonepronitsayemosti,
stoka i smyva na kashtanovykh shchebnistykh pochvakh
pravoberezh'ya nizhney Volgi v tselyakh ikh melioratsii).

PERIODICAL: Tr. Pochv. in-ta AN SSSR, 1955, Vol 48, pp 5-141

ABSTRACT: The experiments took place along the slope (with a
northern exposure) which drops down to the Kamyshinka
River four km west of the city of Kamyshin. The slope
is 450 km long, and its average steepness is 11 percent
(6 to 17 percent). The following methods were employed:
application of artificial precipitation, with and
without ground flow, establishing of runoff zones,

Card 1/2

USSR/Soil Science - Cultivation, Melioration, Erosion.

J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67973

Author : Surmach, G.P.

Inst :

Title : The Struggle with Erosion on the Chernozems of Kuybyshev Oblast'.

Orig Pub : C. kh. Povolzh'ya, 1957, No 3, 31-35.

Abstract : Soil erosion in the Trans-Volga area is caused primarily by thaw waters, but rain water also plays a part. In some rayons adjoining the Volga valley ~ 20% of the plowed area is heavily or very heavily eroded. On slopes that are steeper than 1° certain techniques of soil tillage are recommended, depending upon the relief and snow--retaining conditions. To prevent the formation of ravines it is recommended that cattle be pastured in enclosures.

Card 1/1

- 54 -

Orig. Pub : Zemledel'stvo, 1957, No. 3, 31-35

APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653930008-6"

On sloping terrain, terracing slopes simultaneously with the fall plowing of the field, using a moldboard (35-40 cm) attached to the third body of a four-gang plow, or to the second of a three-gang plow. The lengthened moldboard terrace 25-30 cm high. On steep slopes being prepared for black fallow one should plow without a moldboard, leaving stubble to form the terrace. The trial with lengthened moldboard was made in Kuybyshevskaya Oblast.
--S.A. Nikitin

1/1

34

Country

: USSR
Category : Forestry. Biology. Typology.

Lang. Auth.

: EngBiol., No. 23 1958, N^o. 104502

Lang. Pub.

: Surmach, G. P.

: The Possibility of Natural Regeneration of Pine in the Kamyshinskiy Mountain Range

: C. kh. 1958, No. 5, 71

SURMACH, G.P.

Do we need this pamphlet? ("Drought and soil erosion control" by
G.A. Cheremisinov. Reviewed by G.P. Surmach). Pochvovedenie no.5:
107-110 My '58.
(Soil conservation) (Droughts) (Cheremisinov, G.A.)

SURMACH, G.P., kand. soł'skokhoz. nauk

New tillage practices for fields between shelterbelts. Zemledelie
6 no.8:12-20 Ag '58. (MIRA 12:11)
(Tillage)

SURMACH, G.P.

Genesis of the topography and syrt deposits in the trans-Volga region.
Pochvovedenie no.9:44-55 S '60. (MIRA 13:9)
(Volga Valley—Physical geography)
(Volga Valley—Clay)

SURMACH, G.P.

Studying water erosion in the trans-Volga portion of Kuybyshev
Province. Pochvovedenie no.2:78-86 p '62. (MIA 15:3)

I. Vsesoyuznyy nauchno-issledovatel'skiy institut agrolesomolirovaniya,
Volgograd.
(Kuybyshev Province--Erosion)

SURMACH, G.P.

Method for determining soil permeability and storm runoff.
Pochvovedenie no.11:93-77 N '62. (MIRA 16;1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut agroekosistem-
lioratsii.
(Soil percolation) (Erosion)

SURMACH, G.P.

"Development of erosion processes in the European part of the
U.S.S.R. and their control" by S.S.Sobolev. Reviewed by G.P.
Surmach. Pochvovedenie no.4:105-111 Ap '63. (MIRA 16:5)
(Soil conservation) (Sobolev, S.S.)

SURNACH, G.P.

Regulation of drainage from agricultural lands in the steppe and
forest steppe regions of the European U.S.S.R. Izv. AN SSSR. Ser.
geog. no.2:59-64 Mr-Ap '65. (MIRA 18:4)

1. Institut agrolescmelioratsii, Volgograd.

SURMACH, G.P.

Effect of the surface microrelief and depth of fall plowing
on the runoff of snow waters. Pochvovedenie no.6:103-113
(MIRA 18:11)
Je '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut agro-
lesomelioratsii. Submitted February 4, 1963.

DOROSINSKIY, L.M., kandidat biologicheskikh nauk; LAMPOVSHCHIKOV, P.;
SURMAN, K.I.

Growing Azotobacter by the depth method. Trudy Vses. inst. sel'khos.
mikrobiol. 13:124-130 '53. (MLRA 8:1)
(Azotobacter) (Bacteriology--Cultures and culture media)

SURMAN, K.I.

Developmental peculiarities of silicate bacterias cultivated
in liquid media. Dokl. Akad. sel'khoz. 23 no.4:32-36 '58.
(MIRA 11:5)

I.Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy
mikrobiologii. Predstavleno akademikom I.I. Samoylovym.
(Bacteria, Silicate)

SURMAN, K.I.

Ability of silicate bacteria to enrich the nutritive medium with free phosphoric acid liberated by them from difficultly soluble sources of phosphorus. Trudy Vses. inst. sel'khoz. mikrobiol. 16:39-44 '60.
(MIRA 13:9)

(Bacteria, Silicate)

(Soils--Phosphorus content)

SURMAN, K.I.

Decomposition of phosphorus compounds, sparingly available to plants, by silicate bacteria. Trudy Inst. mikrobiol. no.11: 269-274 '61 (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-khozyaystvennoy mikrobiologii Vsesoyuznoy akademii sel'sko-khozyaystvennykh nauk imeni Lenina.

*

SURMANEK, Josef, inz.

Planning and control of building. Poz stavby 13 no.3:
90-91 '65.

1. Research Institute of Mechanization, Prague.

INDZHIKYAN, M.G.; SURMANYAN, S.A.; BABAYAN, A.T.

Investigations in the field of quaternary ammonium compounds.
Report No.8: Stability of bonds of certain organic radicals in
quaternary ammonium compounds. Izv. AN Arm. SSR Ser. khim. nauk
(MIRA 10:12)
10 no.3:213-221 '57.

1. Khimicheskiy institut AN ArSSR.
(Armonium compounds) (Chemical bonds)

BABAYAN, A.T.; INDZHIKYAN, M.G.; SURMANYAN, S.A.

Comparative stability of bonds between the allyl and benzyl
radicals and nitrogen. Dokl AN Arm. SSR 26 no.4:235-240 '58.
(MIRA 11:5)

1. Chlen-korrespondent AN Armyanskoy SSR (for Indzhikyan).
2. Institut organicheskoy khimii Akademii nauk Armyanskoy
SSR.

(Allyl) (Benzyl) (Nitrogen)

SURMASHIKO V, K

K. SURMASHIKOV

"The achievements in poultry breeding of the state agricultural farm Kondov in
Stalin. p. 12. (KOMITATO ZEMELIE, Vol. 7, no. 6, Oct. 1952, Sofiya,
Bulgaria.)

SC: Monthly List of East European Accessions, L.C., Vol. 2 No. 7, July 1953, Uncl.

ACC NR: AP6028026

SOURCE CODE: UR/0251/66/042/001/0045/0049

AUTHORS: Tavadze, F. N. (Academician AN GruzSSR); Surmava, G. G.; Svetlov, I. L.

ORG: Georgian Metallurgical Institute (Gruzinskij institut metallurgicheskiy)

TITLE: Investigation of diffusion in microwires of copper

SOURCE: AN GruzSSR. Soobshcheniya, v. 42, no. 1, 1966, 45-49

TOPIC TAOS: copper, zinc, wire, metal diffusion

ABSTRACT: The diffusion of zinc in microwires of copper was studied. The wire specimens were prepared after the method of A. V. Ulitovskiy (Tonkaya provoloka v sploshnoy steklyannoy izolyatsii i vozmozhnosti yeye primineniya. Pribory i tekhnika eksperimenta, 3, 1957, 11). The diffusion of zinc in the wire specimens was studied after the method of B. S. Bokshteyn, A. A. Zhukhovitskiy, and G. G. Surmava (Metodika i ustanovka dlya izuchenija diffuziy v nitevidnykh kristallakh. Zavodskaya laboratoriya, 4, 1966). The specimens had diameters of 6 and 20 microns. The diffusion was studied at 600, 650, and 700°C, and the experimental results are summarized in graphs and tables (see Fig. 1). It was found that the activation energy for diffusion of zinc was approximately 22.5 kcal/mole and that the thermal dependence of the diffusion coefficient in thin and thick copper specimens was

$$D = 4.3 \cdot 10^{-6} \exp(-24000/RT),$$

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ACC NR: AP6028026

$$(D = 1.9 \cdot 10^{-8} \exp(-26000/RT)),$$

respectively.

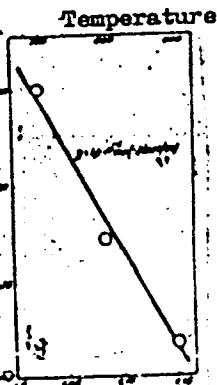


Fig. 1. Thermal dependence of the diffusion coefficient
for zinc in thin microwires of copper ($d_0 \approx 6$ microns)

Orig. art. has: 1 table, 5 graphs, and 7 equations.

SUB CODE: 11/ SUBM DATE: 28Jul65/ ORIG REF: 005/ OTH REF: 003

Card 2/2

ACCESSION NR: AR4027670

S/0276/64/000/001/B071/B071

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 1B378

AUTHOR: Napetvaridze, P. G.; Tabidze, A. I.; Surmava, G. G.

TITLE: Effect of nitrogen on the properties of welded seams in 18-8 austenitic steel

CITED SOURCE: Tr. In-ta metallurgii. AN GruzSSR., v. 13, 1962 (1963), 239-245

TOPIC TAGS: welded seam, welding, steel welding, austenitic steel, austenitic steel welding,

TRANSLATION: Studies were made of 1Kh18N9T steel samples 4; 5 and 6 mm in thickness with the following chemical composition (%): 0.09 C; 0.5 Si; 0.9 Mn; 17.37 Cu; 10.8 Ni; 0.78 Ti; 0.03 P; 0.025 S. The nitrogen was introduced into the welding bath in the form of nitrided manganese. The result of the study was reported that in the welding of 1Kh18N9T with this wire, the nitrogen refines the seam structure and improves the stability of seams against hot cracking.

Card 1/2

ACCESSION NR: AR4027670

5 illustrations. Bibliography with 5 titles. T. Kislyakova.

DATE ACQ: 03Mar64

SUB CODE: ML

ENCL: 00

Card 2/2

KARETVAARIAN, P.G.; TABIBIAN, A.I.; SURMAVA, G.G.

Effect of nitrogen on the properties of welded joints in type
18-8 austenitic steel. Trudy Inst. met. AN Gruz. SSR vol. 13:
239-245 (1970) (MIRA 17:9)

L 39979-66 EWT(l)/SWT(m)/T/EWP(t)/ETI IJP(c) AC/JD

ACC NR: AP6021711

SOURCE CODE: UR/0251/66/041/003/0549/0554

AUTHOR: Tavadze, F. N. (Academician AN GruzSSR); Surmava, G. G.

ORG: Georgian Institute of Metallurgy (Gruzinskiy institut metallurgii)

TITLE: Production of copper whisker crystals and the shapes of the crystals

SOURCE: AN GruzSSR. Soobshcheniya, v. 41, no. 3, 1966, 549-554

TOPIC TAGS: copper whisker, heat of sublimation, temperature dependence, crystal growth, crystal property, crystal impurity

ABSTRACT: A study of filamentary copper crystals (whiskers) produced by the thermochemical reaction $CuI_{(liq)} + H_2(gas) \rightarrow Cu_{(whisker)} + HI_{(gas)}$ was made. The crystals were grown on the bottoms and walls of combustion boats. Optimum growth parameters are tabulated for whiskers ranging in diameter from 3 to 50 mm and in length from 5 to 30 mm; these were grown 50-90 min, at temperatures from 590 to 700°C and at hydrogen inlet rates of 0.05-0.25 l/min. Microcrystals having 100-1000 μ diameters and lengths of 30-60 mm were also grown. Here, the temperatures ranged from 700 to 800°C, the growth time from 120 to 165 min and the hydrogen inlet rates from 0.24 to 0.40 l/min. Steps (terraces), cracks and other defects were observed in the single crystals at 100x. Both the quantity and quality of the whiskers depended on the growth conditions, i. e., on temperature, growth time and purity of the reducing gas and CuI. In

Card 1/2

SURMELI, D.

Soft roofing made of used and reclaimed rubber. Prem. keep.
no. 10:31-33 O '55. (MLRA 9:4)

1. Zaveduyushchiy laboratoriy bituminesnykh vyashuschikh
Vsesoyuznogo nauchno-issledovatel'skogo instituta asbestsae-
menta.

(Roofing) (Russia)

AID P - 3827

Subject : USSR/Mining

Card 1/1 Pub. 78 - 15/25

Author : Surmeli, D. D.

Title : Dependence of the quality of oil bitumens (oxidized) on
the depth of extraction of oil fractions at oil distillation

Periodical : Neft. khoz., v. 33, #11, 77-80, N 1955

Abstract : The authors analyses the different kinds of petroleum
asphalt used for roof coverings and points out that
their quality largely depends on the depth at which the
cracked bituminous residue is taken out from vacuum
distillation and finished by oxidation. Charts, tables.

Institution : None

Submitted : No date

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653930008-6

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653930008-6"

SURMELI, D. D., Cand Tech Sci -- (diss) "Effect of the depth of separation
of oil fractions in distillation of petroleum upon physicomechanical
properties of oxidized bitumens and their weather resistance." Mos,
1957. 8 pp (Min of Higher Education USSR, Mos Order of Lenin Chem-Technolo-
gical Inst im D. I. Mendeleyev), 150 copies (KL: 17-58, 109)

-50-

ZEVIN, L.S.; SURMELI, D.D.; KHEYKER, D.M.

Method of determining the paraffin hydrocarbon content in oxidized
petroleum bitumens. Trudy NIIAsbesttsementa no.10:39-44 '59.
(MIRA 16:8)

(Paraffins) (Bitumen)

SURMELI, D.D., kand.tekhn.nauk; PARFENOV, A.P., inzh.

Bituminous binding materials made with reclaimed rubber.
Avt.dor. 23 no.6:19-20 Je '60. (MIRA 13:6)
(Rubber, Reclaimed) (Binding materials)

SURMELI, D.D., kand.tekhn.nauk; MAR, Ch.D., inzh.; LEVCHENKO, G.I., inzh.;
KRYLOV, I.F., inzh.; LESNYKH, M.V., inzh.

"Poroizol" is a material for packing joints. Stroi. mat. 7 no.9:
31-32 S '61. (MIRA 14:11)
(Rubber, Synthetic)

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Trudy NIIAsbesttsementa no.16:108-115 '63. (MIRA 16:8)
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CIA-RDP86-00513R001653930008-6

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(Railroads--Maintenance and repair)

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PA 48/49T77

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Coal

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new mines and many miles of additional tunnels.
It is important that loading work in tunnels
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KORSHAK, V.V.; SERGEYEV, V.A.; SURNA, Ya.A.; PERNIKIS, R.Ya.

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1. Institut elementoorganicheskikh soyedineniy AN SSSR i Institut
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BIOLOGICHESKAIA MARKA; SELSKOMU I TISKOMU KHOZIAISTVU. (Latvijas PSR Zinatnu akademija. Biologijas Zinatnu nodala) Riga, Latvia, No. 16, 1958. In Russian.

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Uncla.

KALNINS, Arv.; SURNA, Jā. A.

Possibilities of increasing the output of furfurole in wood
pyrolysis. Vestis Latv ak no.11:107-113 '59. (EEAI 9:11)

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un koksnes kimijas instituts.
(Furaldehyde) (Pyrolysis) (Wood)

L 23458-65 EWT(n)/SPP(c)/EWP(j)/^z/ Pe-4/Pr-4 RM

ACCESSION NR: AR4048181 S/0081/64/000/009/S028/S029

SOURCE: Ref. zh. Khimiya, Abs. 9S154

AUTHOR: Alksnis, A. F., Surna, Ya. A., Indane, M. K.

TITLE: Isomorphic copolycondensation of polyethyleneterephthalate with 7- and (6-) carboxy-, 2-methylo-, 1,4-benzodioxan

CITED SOURCE: Izv. AN LatvSSR, Ser. khim., no. 3, 1963, 367-369

TOPIC TAGS: copolymer, isomorphic copolycondensation, polyethylene terephthalate, benzodioxan copolymer, polymer flexibility, polymer density

TRANSLATION: The isomorphic copolycondensation of polyethyleneterephthalate (density of the polymer after heating for 1 hour at 187°C = 1.386 g/cc) with 7- (and 6-) carboxy-, 2-methylo-, 1,4-benzodioxan, carried out in a CHCl_3 solution (2 mm kg), 4 hours, leads to an increase in the crystallinity and packing density of the polymer, as revealed by X-ray analysis. The same effect is observed in the case of the crystallinity of the polymer obtained using amorphous diisocyanate. It is evident that an increase in the number of methylene groups can be drawn out in the copolymer.

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